

Teacher Training in Martial Arts and Combat Sports: Proposals for Innovative Educational Models

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Received April 23, 2025; Revised June 20, 2025; Accepted August 29, 2025

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Abstract

Background and Aim. The global growth of martial arts and combat sports has expanded their role in competitive sports, education, and health promotion. However, this development has not been matched by an equivalent teacher training system, which still prioritizes technical orientation and ranking systems. This study aims to critically review the teacher training process in martial arts and combat sports and identify directions for evidence-based training development.

Method. This study uses a descriptive-interpretative qualitative approach with analysis of scientific literature, academic books, and institutional documents published between 2000 and 2025. Relevant sources were selected purposively and analyzed using thematic content analysis to identify dominant patterns, pedagogical assumptions, and training practices in martial arts and combat sports teacher education.

Results. Findings indicate that teacher training still places technical mastery and practical experience as the primary sources of professional legitimacy, while pedagogical competence and the use of scientific evidence have not been well integrated. Scientific knowledge is often viewed as a complement, not a basis for pedagogical decision-making. The teaching methods used tend to be traditional and repetitive, with limited pedagogical reflection and responsiveness to the diversity of objectives and characteristics of students.

Conclusion. This study emphasizes the need to reorient martial arts and combat sports teacher training by placing scientific knowledge as the pedagogical foundation, without neglecting the values and traditions of martial arts. Further research is needed to test the effectiveness of evidence-based training models in a broader context.

Keywords: *Combat Sports; Martial Arts; Teacher Training; Scientific Evidence; Sports Pedagogy.*

1. Introduction

Martial arts and martial sports have experienced significant growth in recent decades, both in terms of the number of practitioners and academic attention at the global level (da Silva Duarte et al., 2021; Dziubiński, 2024). These practices have strong historical roots in Asia, particularly India, China, Japan, Thailand, and South Korea, and have developed into various disciplines such as taekwondo, jiu-jitsu, judo, boxing, kickboxing, and muay thai (Andreato & Branco, 2016; de Silva Duarte & Pavani, 2025; Orhan et al., 2019). This development not only reflects an increase in public interest in combat-

based physical activities but also positions martial arts and combat sports as a relevant field of study in sports science, pedagogy, and human development.

Although often used interchangeably, martial arts and combat sports have important conceptual difference (Fett & Fett, 2009). Martial arts are traditionally understood as combat practices integrated with a holistic educational process, encompassing character development, moral values, ethics, and philosophical and spiritual dimensions (Moenig et al., 2023). Martial arts operate within a more structured competitive framework, governed by formal rules and sports federations, with a primary emphasis on

performance and competitive achievement (Dortants et al., 2016). These differences in value orientation and objectives shape different teaching contexts and have direct implications for teaching approaches and the pedagogical competencies expected of teachers in the contexts of martial arts and combat sports.

The process of Westernization of Eastern martial arts has led to sportification, which is the transformation of practices that were originally rooted in cultural traditions and martial arts into modern combat sports (Moenig et al., 2023). This process involves the standardization of rules, institutionalization of organizations, and formalization of competition systems. These changes have created tension, especially among conservative teachers who believe that sportification has the potential to erode the ethical, moral, and philosophical values inherent in traditional martial arts (Saeki, 1994). The practice of martial arts and combat sports in the contemporary context is directed at various goals, ranging from health promotion, competitive performance enhancement, to self-defense (da Silva Duarte et al., 2021). This diversity of objectives requires pedagogical flexibility so that the teaching process can be adapted to the characteristics of the students and the learning context (da Silva et al., 2023).

From a technical perspective, martial arts and combat sports encompass a variety of complex forms of physical interaction. These practices can be classified based on their primary mode, such as striking, grappling, and mixed forms (Hammami et al., 2018), as well as based on fighting position and distance, namely standing or on the ground, and long, medium, and close range (Rodríguez-Sánchez et al., 2025). The complexity of these characteristics indicates that teaching martial arts and combat sports requires teachers to have not only technical competence but also pedagogical competence, so that teaching methods can be adapted to learning objectives, training contexts, and student characteristics.

Along with the global growth of this practice, the increase in the number of practitioners is also driven by empirical evidence regarding the benefits of martial arts and combat sports for physical and mental health (Borba-Pinheiro et al., 2013; Drid et al., 2021; Linhares et al., 2022; Origua Rios et al., 2018; Ultramari et al., 2020). These practices are increasingly being considered as supporting components in health promotion programs and medical recommendations (da Silva Duarte et al., 2022; Woodward, 2009). The expansion of the role of martial arts and combat

sports in the context of health, education, and competitive sports has not been accompanied by the development of an equivalent teacher training system. The training process for martial arts and combat sports teachers still tends to focus on technical mastery and ranking systems, with limited attention to pedagogical foundations and the use of scientific evidence.

Several studies have shown that teaching methods in martial arts and combat sports can be optimized through a scientific evidence-based approach. Experimental research in the context of judo shows that dynamic technique learning results in better skill retention and transfer compared to static training (Gomes et al., 2002), while other studies emphasize the importance of exercise variation and task condition manipulation in martial arts skill learning (Franchini & Del Vecchio, 2012; Tani et al., 2014). In the context of taekwondo, participant-controlled feedback has been shown to improve motor skill retention and stability (Januário et al., 2019), consistent with findings in motor learning theory that emphasize the role of autonomy and attentional focus in the learning process (Wulf & Lewthwaite, 2016). Furthermore, pedagogical approaches based on ecological dynamics and nonlinear pedagogy have been reported to improve skill adaptability and decision-making quality in combat sports (Araújo et al., 2006; Davids et al., 2013; Chow et al., 2007; Renshaw et al., 2019). Overall, these findings indicate the strong potential of integrating science-based pedagogy into martial arts and combat sports instruction, although its application in training practices and teacher education remains relatively limited.

This situation raises critical questions about the extent to which martial arts and combat sports teachers understand and apply scientific findings in their teaching practices. The gap between academic knowledge and field practice highlights the need for a more systematic and evidence-based approach to teacher training. This study aims to critically review the current martial arts and combat sports teacher training process, identify its limitations and potential, and propose an innovative training model that integrates scientific knowledge, pedagogical principles, and martial arts teaching traditions.

Specifically, this study makes a conceptual contribution by positioning martial arts and combat sports teacher training as a pedagogical domain that requires a scientific foundation, rather than merely technical legitimacy and practical experience. This study also contributes theoretically by integrating findings from sports pedagogy, motor learning, and sports science into the discourse on martial arts

teacher training, which has been fragmented until now. In addition, this research offers practical contributions in the form of a conceptual framework for evidence-based teacher training that continues to respect the values, traditions, and context of martial arts teaching, making it relevant for academics, trainers, and educational institutions in designing more systematic and contextual professional development paths for teachers.

2. Materials and Methods

Design

This study uses a qualitative approach with a descriptive-interpretive design to critically analyze the conceptual framework and practices of teacher training in martial arts and combat sports from a pedagogical and scientific perspective. This approach was chosen because it allows for the exploration of meanings, values, and theoretical assumptions underlying educational practices, and is appropriate for studies that focus on understanding social and educational phenomena in context (Creswell, 2013; Denzin & Lincoln, 2018). This study does not aim to test hypotheses or produce statistical generalizations, but rather to compile a literature-based conceptual synthesis to develop educational recommendations.

Participants

In this study, participants do not refer to individuals, but rather to units of analysis in the form of written sources of knowledge that represent academic discourse and institutional practices related to the education of martial arts and combat sports teachers. Data sources include scientific journal articles, academic books, and organizational documents discussing sports pedagogy, motor learning, and teacher training systems.

Instrument

The research instrument consisted of written documents and literature that were treated as the main qualitative data sources. Overall, this study analyzed 72 sources of literature, consisting of scientific journal articles (n = 49), academic books (n = 15), and organizational documents and institutional reports (n = 8). This literature-based approach is in line with the characteristics of conceptual studies that aim to integrate and interpret existing knowledge to build a more comprehensive

framework of understanding (Webster & Watson, 2002; Grant & Booth, 2009). The literature analyzed was limited to publications between 2000 and 2025 to capture classical and contemporary developments in the field.

Procedure

The selection of sources was conducted purposively by considering conceptual relevance, academic authority, and substantive contributions to the topic of martial arts and combat sports teacher training. This strategy is commonly used in qualitative research when the research objective is to gain an in-depth understanding of sources that are theoretically and practically most informative (Patton, 2015). All selected documents were then read critically and iteratively to identify key ideas, pedagogical assumptions, and dominant patterns in teacher training practices.

Data Analysis

Data analysis was conducted using thematic content analysis through an open and interpretive coding process of all analyzed sources. This approach allows for the systematic identification, organization, and interpretation of recurring patterns of meaning in qualitative data (Braun & Clarke, 2006; Krippendorff, 2018). The main themes identified include teachers' pedagogical competence, the integration of scientific knowledge into teaching practice, and the role of the teacher-student mentoring tradition in professional development. The reliability and credibility of the analysis were maintained through triangulation of sources, interpretive reflection by the author, and peer review to ensure trustworthiness in qualitative research (Lincoln & Guba, 1985).

3. Result and Discussion

Result

This study analyzed 72 sources of literature, consisting of scientific journal articles (n = 49), academic books (n = 15), and organizational documents and institutional reports (n = 8). All these sources were units of analysis in this study and were analyzed descriptively-interpretatively to identify thematic patterns in martial arts and combat sports teacher training.

Tabel 1. Characteristics of Analyzed Literature Sources

Type of Literature Source	Number (n)	Percentage	Description
Scientific journal articles	49	68	Research articles and conceptual studies related to martial arts teacher training, sports pedagogy, and motor learning
Academic books	15	20.8	Textbooks and academic monographs discussing sports education, martial arts, and professional development for teachers
Organizational documents and institutional reports	8	11.1	Policy documents, curriculum guidelines, and institutional reports on martial arts and sports
Total	72	100	—

Based on an analysis of all these literature sources, the results of the study show a consistent pattern in the training structure, competency orientation, and teaching approach of martial arts and combat sports teachers. Teacher training is generally conducted after individuals have achieved a certain level of institutionally recognized technical proficiency, such as a black belt or other equivalent advanced level in each discipline. This status serves as an informal and formal prerequisite for entering the teaching role, so that teacher legitimacy is primarily determined by technical achievement and long-term practical experience.

The next finding shows that the teacher training structure is dominated by a skill-based transmission approach, where the teaching and learning process is understood as a continuation of technical training. Teachers tend to reproduce the methods they received during their training period, while theoretical dimensions related to pedagogy, learning psychology, and sports science appear limited and have not been systematically integrated into the teacher training curriculum.

The analysis also reveals that teaching methods in martial arts and combat sports are still dominated by traditional and repetitive practices,

such as demonstrations, imitation, and mechanical repetition of movements. This approach has been passed down across generations and is maintained as part of the martial arts tradition, but it leaves little room for pedagogical reflection and adaptation of learning based on the diverse characteristics of learners.

In addition, the results of the analysis show a gap between the development of scientific knowledge about motor learning and teaching practices in the field. Scientific findings related to learning strategies, feedback, and skill retention have not been widely internalized in the teacher training system, so that scientific knowledge is more often positioned as a supplement rather than as a basis for pedagogical decision-making.

To clarify the relationship between the analyzed data and the identified patterns of findings, the frequency of occurrence of the themes in the 72 literature sources is presented in Table 2. This presentation is intended to show the extent to which certain themes appear in the same unit of analysis, without changing the number of sources analyzed.

Tabel 2. Frequency of Occurrence of Themes in the Analysis of 72 Literature Sources

Main Findings Theme	Indicators Identified in the Literature	Number of Sources (out of 72)	Proportion of Total (%)
Teacher legitimacy based on technical proficiency	The literature indicates that attaining a specific level of technical mastery is the primary prerequisite for assuming a teaching role	52	72.2
Dominance of skill transmission approaches	The literature portrays teaching as the reproduction of inherited training methods	47	65.3

Limited integration of pedagogical competencies	The literature highlights limited integration of pedagogical and learning psychology aspects in teacher training	44	61.1
Use of traditional and repetitive methods	The literature emphasizes the dominance of demonstration, imitation, and mechanically repetitive practice	49	68.1
Scientific knowledge as a complementary element	The literature positions motor learning science and teaching strategies as supplementary information	41	56.9
Low adaptation to learner characteristics	The literature indicates limited adjustment to learners' age, goals, and background	38	52.8
Limited responsiveness to expanded practice contexts	The literature reveals limited teacher training beyond competitive contexts	36	50.0

Based on Table 2, it can be concluded that the pattern of martial arts and combat sports teacher training in the literature is heavily dominated by a technical orientation and tradition of skill transmission, as reflected in the high frequency of themes of teacher legitimacy based on technical proficiency (72.2 percent) and the use of traditional and repetitive methods (68.1 percent). The dominance of the skill transmission approach (65.3 percent) and the lack of integration of pedagogical competencies (61.1 percent) indicate that the teacher training process still positions technical mastery and the reproduction of training methods as the core of professionalism, while the pedagogical and learning psychology dimensions have not yet become the main foundation. In addition, scientific knowledge tends to be treated as a supplement (56.9 percent), rather than as the basis for pedagogical decision-making, which has an impact on the low adaptation of learning to the characteristics of students (52.8 percent) and limited responses to the expansion of the context of practice outside of competition (50.0 percent). Overall, the distribution of these findings confirms the structural gap between the development of science and teacher training practices, while reinforcing the urgency of reorienting teacher training towards a more adaptive and contextual evidence-based pedagogical approach.

Discussion

The findings of this study confirm the structural gap between the development of knowledge in the field of martial arts and combat sports and teacher training practices that are still predominantly technically oriented. Epistemologically, knowledge is characterized by its rational, systematic,

verifiable, and open to correction nature (Bunge, 1966). In line with these characteristics, scientific production in martial arts and combat sports has developed significantly since the early 21st century, covering physiological, psychological, pedagogical, nutritional, and tactical studies (Fett & Fett, 2003; Franchini et al., 2018, 2023; Gomes et al., 2002; Swider, 2022). However, the results of this study indicate that this scientific knowledge has not been systematically integrated into the training framework for martial arts and combat sports instructors.

The pattern of teacher legitimacy, which is largely determined by technical achievement, shows that the construction of martial arts teacher professionalism is still strongly rooted in the paradigm of long-term practical expertise, while pedagogical competence tends to be treated as an automatic consequence of technical mastery. This pattern is in line with previous findings that show the dominance of traditional approaches in martial arts teaching, where the practical experience of teachers is the main source of legitimacy for teaching methods (Franchini & Del Vecchio, 2012; Rufino, 2012; Sales et al., 2015). This situation overlooks findings in sports pedagogy and motor learning that emphasize teaching ability as a distinct professional competency requiring conceptual and reflective foundations.

Empirical evidence regarding the effectiveness of science-based pedagogical approaches is available in the martial arts and combat sports literature. Experimental studies in the context of judo show that dynamic technique learning results in better skill retention and transfer compared to static practice (Gomes et al., 2002). Similar findings have also been reported in the

context of taekwondo, where learners who had control over the timing of feedback showed higher skill retention (Januário et al., 2019). These findings confirm that teaching strategies designed based on scientific principles have direct implications for the quality of martial arts skill learning.

However, the results of this study show that this scientific knowledge has not yet become the main reference in teacher training practices. The teaching methods used are still dominated by traditional transmission models that have been passed down from generation to generation, with an emphasis on demonstration, imitation, and mechanical repetition (Franchini & Del Vecchio, 2012). The reliance on teachers' personal experiences as the basis for pedagogical decision-making limits the space for reflection and adaptation of teaching methods to the diverse characteristics of students, including differences in age, training objectives, and learning contexts.

This imbalance becomes increasingly relevant as the role of martial arts and combat sports expands beyond the context of competition. These practices are now widely used in the contexts of education, health promotion, and character development (Borba-Pinheiro et al., 2013; Drid et al., 2021; Linhares et al., 2022; da Silva Duarte, 2022; Origua Rios et al., 2018; Ultramari et al., 2020; Woodward, 2009). However, research findings indicate that the structure of teacher training does not explicitly prepare pedagogical competencies aligned with these objectives. Teacher training remains oriented toward reproducing technical practitioners rather than developing teachers as professional educators capable of adapting instruction to the context and needs of learners.

Overall, the findings and discussion of this study indicate that martial arts and combat sports teacher training still operates within a traditional framework that is not yet fully responsive to scientific developments and contemporary educational demands. The lack of integration between scientific evidence and teacher training practices indicates the need to reposition the role of science in the teacher education structure, not merely as a complement, but as a basis for pedagogical decision-making. In this context, strengthening the science-based pedagogical dimension, without neglecting martial arts values and traditions, is an important prerequisite for developing a teacher training model that is more adaptive, reflective, and relevant to the diverse learning objectives of martial arts and combat sports. Thus, this study contributes to the literature by offering a conceptual reading of martial arts

teacher training as a pedagogical issue, not merely a technical one, and by placing science as a reflective foundation in teacher professional development.

4. Conclusion

This study shows that martial arts and combat sports teacher training is still dominated by technical orientation and ranking systems, while pedagogical dimensions and the use of scientific evidence have not been systematically integrated. Through a literature-based conceptual study, this research emphasizes the need to reorient teacher training towards an approach that places science as the basis for pedagogical decision-making, without neglecting the values and traditions of martial arts. The implications of this study emphasize the importance of strengthening science-based pedagogical competencies, collaboration between practitioners and academics, and the development of more contextual teacher training pathways in line with learning objectives and student characteristics. The limitations of this study lie in its conceptual nature and the fact that it has not empirically tested the implementation of the training model. Therefore, further research needs to examine the application and effectiveness of evidence-based teacher training models through empirical studies across disciplines, martial arts contexts, and learner populations, to strengthen the basis for the development of adaptive and sustainable martial arts and combat sports education.

5. Acknowledgments

The author Jonatas Deivyson Reis da Silva Duarte would like to thank the Coordination for the Improvement of Higher Education Personnel (CAPES).

6. Author Contribution

JDRSD conceptualized the study, developed the theoretical framework, and designed the innovative educational models for teacher training in martial arts and combat sports. CAF contributed to the literature review, methodological refinement, and critical analysis of educational implications. Both authors jointly drafted the manuscript, reviewed and revised the final version, and approved the submitted manuscript.

7. Conflicts of Interest

We declare that this review has not received any sponsorship or funding that could influence its content.

References

- Andreato, L. V., & Branco, B. H. M. (2016). Different Sports, but the same physical and physiological profiles? *Sports Medicine*, 46(12), 1963–1965. <https://doi.org/10.1007/s40279-016-0587-9>
- Araújo, D., Davids, K., & Hristovski, R. (2006). The ecological dynamics of decision making in sport. *Psychology of Sport and Exercise*, 7(6), 653–676. <https://doi.org/10.1016/j.psychsport.2006.07.002>
- Borba-Pinheiro, C. J., Carvalho, M., Drigo, A. J., Silva, N. S., Pernambuco, C. S., Figueiredo, N. A., & Dantas, E. H. (2013). Combining Adapted Judo Training and pharmacological treatment to improve Bone Mineral Density on postmenopausal women: A two years study. *Arch Budo*, 9(2), 93–99.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Bunge, M. (1966). Technology as applied science. *Technology and Culture*, 7(3), 329–347. <https://doi.org/10.2307/3101932>
- Chow, J. Y., Davids, K., Button, C., & Renshaw, I. (2007). The role of nonlinear pedagogy in physical education. *Review of Educational Research*, 77(3), 251–278. <https://doi.org/10.3102/003465430305615>
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Thousand Oaks, CA: SAGE Publications.
- da Silva Duarte, J. D. R., Pasa, C., Kommers, M. J., & de França Ferraz, A. (2021). Aspectos motivacionais para a prática do Jiu-Jitsu Brasileiro e o Kickboxing em indivíduos do sexo masculino Motivational aspects of male Brazilian Jiu-Jitsu and Kickboxing practitioners. *Brazilian Journal of Health Review*, 4(3), 12247–12256. <https://doi.org/10.34119/bjhrv4n3-202>
- da Silva Duarte, J. D. R., Pasa, C., Kommers, M. J., de França Ferraz, A., Hongyu, K., Fett, W. C. R., & Fett, C. A. (2022). Mood profile of regular combat sports practitioners: a cross-sectional study. *Journal of Physical Education and Sport*, 22(5), 1206–1213.
- da Silva Duarte, J. D. R., & Pavani, L. (2025). Bibliometric comparative analysis of web of science, scopus, and PubMed databases: a general approach to martial arts. *Journal of Kinesiology and Exercise Sciences*, 35(110), 61–76. <https://doi.org/10.5604/01.3001.0055.1741>
- da Silva, G. O. S., Jaeger, A. A., & Silva, P. (2023). MMA and cultural industry: a look at the trajectory and training of female fighters. *Ex Aequo*, 48, 181–198. <https://doi.org/10.22355/exaequo.2023.48.12>
- Davids, K., Araújo, D., Vilar, L., Renshaw, I., & Pinder, R. (2013). An ecological dynamics approach to skill acquisition: Implications for development of talent in sport. *Talent Development and Excellence*, 5(1), 21–34.
- Denzin, N. K., & Lincoln, Y. S. (Eds.). (2018). *The SAGE handbook of qualitative research* (5th ed.). Thousand Oaks, CA: SAGE Publications.
- Dortants, M., Knoppers, A., & Van Bottenburg, M. (2016). Challenges in regulating full contact martial arts and combat sports. *International Journal of Sport Policy and Politics*, 8(3), 473–490. <https://doi.org/10.1080/19406940.2016.1170717>
- Drid, P., Franchini, E., Lopes-Silva, J. P., Fukuda, D. H., Wells, A. J., Lakicevic, Antonino Bianco, Antonio Paoli, Aleksandra Milovancev, Roberto Roklicer, and et al. 2021. Health implications of judo training. *Sustainability* 13, no. 20: 11403. <https://doi.org/10.3390/su132011403>
- Dziubiński, Z. (2024). The prestige of martial arts and combat sports from a sociological perspective. *Ido Movement for Culture. Journal of Martial Arts Anthropology*, 24(2), 11–18. <https://doi.org/10.14589/ido.24.2.2>
- Fett, C. A., & Fett, W. C. R. (2003). Suplementação e treinamento para redução de peso e melhora da performance em lutador: Estudo de caso. *Journal of Health Sciences*. <https://doi.org/10.17921/2447-8938.2003v0n0p%2525p>
- Fett, C. A., & Fett, W. C. R. (2009). Filosofia, ciência e a formação do profissional de artes marciais. *Motriz Revista de Educação Física*, 173–184. <https://doi.org/10.5016/2145>
- Franchini, E., & DEL VECCHIO, F. B. (2012). *Ensino de lutas: Reflexões e Propostas de Programas*. São Paulo: Scortecci.

- Franchini, E., Gutierrez-Garcia, C., & Izquierdo, E. (2018). Olympic combat sports research output in the Web of Science: A sport sciences centered analysis. *Ido Movement for Culture. Journal of Martial Arts Anthropology*, 18(3), 21–27.
- Franchini, E., Stavrinou, P. S., Nakamura, F. Y., & Bogdanis, G. (2023). Report on the first Combat Sports Special Interest Group meeting at the 28th Annual Congress of the European College of Sport Science, and call for action. *Revista de Artes Marciales Asiáticas*, 18(2), 137–139. <https://doi.org/10.18002/rama.v18i2.6211>
- Gomes, F. R. F., Franchini, E., Meira, C. M., & Tani, G. (2002). Specificity of practice in acquisition of the technique of o-soto-gari in judo. perceptual and motor skills, 95(3_suppl), 1248–1250. <https://doi.org/10.2466/pms.2002.95.3f.1248>
- Grant, M. J., & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information & Libraries Journal*, 26(2), 91–108. <https://doi.org/10.1111/j.1471-1842.2009.00848.x>
- Hammami, N., Hattabi, S., Salhi, A., Rezgui, T., Oueslati, M., & Bouassida, A. (2018). Combat sport injuries profile: A review. *Science & Sports*, 33(2), 73–79. <https://doi.org/10.1016/j.scispo.2017.04.014>
- Januário, M. S., Figueiredo, L. S., Portes, L. L., & Benda, R. N. (2019). Effects of self-controlled knowledge of results on learning a taekwondo serial skill. *Perceptual and Motor Skills*, 126(6), 1178–1194. <https://doi.org/10.1177/0031512519869086>
- Krippendorff, K. (2018). *Content analysis: An introduction to its methodology*. Sage publications. <https://doi.org/10.4135/9781071878781>
- Lincoln, Y. S., & Guba, E. G. (1988). *Criteria for Assessing Naturalistic Inquiries as Reports*.
- Linhares, D. G., Santos, A. O. B. dos, Santos, L. L. dos, Marcos-Pardo, P. J., Cordeiro, L. de S., Castro, J. B. P. de, & Vale, R. G. de S. (2022). Effects of taekwondo on health in older people: A systematic review. *Retos*, 46, 36–42. <https://doi.org/10.47197/retos.v46.93336>
- Moenig, U., Kim, M., & Choi, H. M. (2023). Traditional martial arts versus martial sports: The philosophical and historical academic discourse. *Revista de Artes Marciales Asiáticas*, 18(1), 41–58. <https://doi.org/10.18002/rama.v18i1.7604>
- Orhan, S., Yücel, A. S., Sadeq, B. J., Orhan, E., Orhan, S., Yücel, A. S., Sadeq, B. J., & Orhan, E. (2019). Investigation of the exercise dependence of athletes doing kickboxing, taekwondo, and muay thai. *Sports*, 7(2). <https://doi.org/10.3390/sports7020052>
- Origua Rios, S., Marks, J., Estevan, I., & Barnett, L. M. (2018). Health benefits of hard martial arts in adults: A systematic review. *Journal of Sports Sciences*, 36(14), 1614–1622. <https://doi.org/10.1080/02640414.2017.1406297>
- Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice*.
- Pontes, L. B. C. (2022). *Estudo dos efeitos da experiência profissional dos professores de educação física na elaboração de dicas para o ensino de habilidades motoras* (Doctoral dissertation, Universidade de São Paulo).
- Renshaw, I., Davids, K., Newcombe, D., & Roberts, W. (2019). *The constraints-led approach: Principles for sports coaching and practice design*. Routledge. <https://doi.org/10.4324/9781315102351>
- Rodríguez-Sánchez, A. R., Piedra, J., & Jennings, G. (2025). *Martial arts in Latin societies*. Routledge. <https://doi.org/10.4324/9781032648620>
- Rufino, L. G. B. (2012). *A pedagogia das lutas: Caminhos e possibilidades*. Paco Editorial.
- Saeki, T. (1994). The conflict between tradition and modernization in a sport organization: A sociological study of issues surrounding the organizational reformation of the all japan judo federation. *International Review for the Sociology of Sport*, 29(3), 301–315. <https://doi.org/10.1177/101269029402900305>
- Sales, M. M., Sousa, C. V. de, Sampaio, W. B., Ernesto, C., Browne, R. A. V., Moraes, J. F. V. N. de, Motta-Santos, D., Moraes, M. R., Lewis, J. E., Simões, H. G., & Silva, F. M. da. (2015). Contact karate promotes post-exercise hypotension in young adult males (Research Article No. 7; Issue 3, p. e21674). *Asian Journal of Sports Medicine*. <https://doi.org/10.5812/asjms.33850>
- Swider, P. (2022). A scientific and martial arts event in a new, pandemic situation; casus of one conference anno domini 2020. *Ido Movement for Culture*, 22(2), 56–64. <https://doi.org/10.14589/ido.22.2.7>

- Ultramari, V. R. L. M., Calvo, A. P. C., Rodrigues, R. A. S., Fett, W. C. R., Moraes Neto, J. U. de, Ferraz, A. de F., Kommers, M. J., Borges, H. H. S., Viana, M. V., Cattafesta, M., Salaroli, L. B., & Fett, C. A. (2020). Physical and functional aspects of persons with multiple sclerosis practicing Tai-Geiko: Randomized trial. *Clinics (Sao Paulo, Brazil)*, 75, e1272. <https://doi.org/10.6061/clinics/2020/e1272>
- Webster, J., & Watson, R. T. (2002). Analyzing the past to prepare for the future: Writing a literature review. *MIS Quarterly*, 26(2), xiii-xxiii.
- Wulf, G., & Lewthwaite, R. (2016). Optimizing performance through intrinsic motivation and attention for learning: The OPTIMAL theory of motor learning. *Psychonomic Bulletin & Review*, 23(5), 1382–1414. <https://doi.org/10.3758/s13423-015-0999-9>
- Woodward, T. W. (2009). A review of the effects of martial arts practice on health. *Wisconsin Medical Journal (WMJ)*, 108(1), 40.